

## CLAIMS

What is claimed is:

Sub A1  
1. A matching network hybrid electro-magnetic compatibility absorber to provide improved radio frequency absorbing performance in a frequency range of approximately 20 MHz to approximately 500 MHz, comprising:

a big element;

a small element that is located beneath the big element;

the big element comprises a big element surface;

the small element comprises a small element surface;

a big element coating that covers a predetermined portion of the big element surface; and

a small element coating that covers a predetermined portion of the small element surface.

2. The matching network hybrid electro-magnetic compatibility absorber of claim 1, wherein the matching network hybrid electro-magnetic compatibility absorber comprises a substantially pyramid-like shape;

the predetermined portion of the big element surface comprises less than an entirety of the big element surface; and

the predetermined portion of the small element surface comprises less than an entirety of the small element surface.

3. The matching network hybrid electro-magnetic compatibility absorber of claim 1, wherein at least one of the big element coating and the small element coating comprises a substantially tear drop shape.

1           4.     The matching network hybrid electro-magnetic compatibility absorber of claim 1,  
2 wherein at least one of the big element coating and the small element coating comprises a  
3 predetermined thickness.

1           5.     The matching network hybrid electro-magnetic compatibility absorber of claim 1,  
2 wherein the big element and the small element are separated by a predetermined distance.

1           6.     The matching network hybrid electro-magnetic compatibility absorber of claim 1,  
2 wherein the big element comprises at least two surfaces; and  
3 a distance between the at least two surfaces comprises a predetermined thickness.

1           7.     The matching network hybrid electro-magnetic compatibility absorber of claim 1,  
2 wherein the big element coating comprises a first material; and  
3 the small element coating comprises a second material.

1           8.     The matching network hybrid electro-magnetic compatibility absorber of claim 1,  
2 further comprising at least one additional big element coating that covers at least one additional  
3 predetermined portion of the big element surface, the at least one additional predetermined  
4 portion of the big element surface being less than an entirety of the big element surface.

1 9. A matching network hybrid electro-magnetic compatibility absorber to provide  
2 improved radio frequency absorbing performance in a frequency range of approximately 20 MHz  
3 to approximately 500 MHz, comprising:

4 a layer comprising a surface; and

5 a coating that covers a predetermined portion of the surface.

1 10. The matching network hybrid electro-magnetic compatibility absorber of claim 9,  
2 wherein the coating comprises a predetermined shape.

1 11. The matching network hybrid electro-magnetic compatibility absorber of claim 9,  
2 wherein the layer comprises at least one additional surface; and  
3 at least one additional coating covers a predetermined portion of the at least one  
4 additional surface, the predetermined portion of the at least one additional surface comprises less  
5 than an entirety of the least one additional surface.

1 12. The matching network hybrid electro-magnetic compatibility absorber of claim 9,  
2 further comprising at least one additional layer, the at least one additional layer comprises at least  
3 one additional surface; and  
4 at least one additional coating covers a predetermined portion of the at least one  
5 additional surface, the predetermined portion of the at least one additional surface comprises less  
6 than an entirety of the least one additional surface.

1 13. The matching network hybrid electro-magnetic compatibility absorber of claim 9,  
2 further comprising at least two elements; and  
3 at least one of the two elements comprises the layer.

1 14. The matching network hybrid electro-magnetic compatibility absorber of claim 9,  
2 wherein the layer comprises at least one additional surface; and  
3 a distance between the surface and the at least one additional surface comprises a  
4 predetermined thickness.

1 15. The matching network hybrid electro-magnetic compatibility absorber of claim 9,  
2 wherein the coating comprises a predetermined thickness; and  
3 the predetermined portion of the surface comprises less than an entirety of the surface.

1 16. A matching network hybrid electro-magnetic compatibility absorber, comprising:  
2 an absorber comprising a surface having a coating;  
3 the coating comprising at least one of a coating type, a coating shape, a coating thickness,  
4 and a coating placement; and  
5 at least one of the coating type, the coating shape, the coating thickness, and the coating  
6 placement is varied as a design parameter to permit absorption of radio frequency energy in a  
7 frequency range extending from approximately 500 MHz to approximately 40 GHz.

1 17. The matching network hybrid electro-magnetic compatibility absorber of claim  
2 16, wherein the coating shape comprises a substantially tear drop shape.

1 18. The matching network hybrid electro-magnetic compatibility absorber of claim  
2 16, wherein the coating covers an entirety of the surface.

1 19. The matching network hybrid electro-magnetic compatibility absorber of claim  
2 16, wherein the coating covers less than an entirety of the surface.

1 20. The matching network hybrid electro-magnetic compatibility absorber of claim  
2 16, wherein the surface comprises at least one additional coating that comprises at least one of at  
3 least one additional coating type, at least one additional coating shape, at least one additional  
4 coating thickness, and at least one additional coating placement.